

WHAT IS CLAIMED IS:

- 1 1. A method for using a computer to implement an auction of a set of first objects and one or
- 2 more complementary second objects, at least one first object having a complementary second
- 3 object, two or more bidders participating in the auction, the method comprising:
- a) initiating an auction by identifying available objects to bidders,
- b) inputting, into the computer, bids for first objects from bidders,
- c) determining, at the computer, based on the bids of step b), whether the auction should
 continue,
 - d) repeating steps b) and c) until the auction is terminated,
 - e) assigning the first objects to bidders based on the bids in force at the time the auction was terminated, and
 - f) assigning a complementary second object to a successful bidder for a first object, based on the bids for the first objects.
 - 2. The method of claim 1 where step f) occurs contemporaneous with steps a) -e).
- 1 3. The method of claim 1 wherein the prices for second objects are based on the prices of first
- 2 objects as reflected in the successful bids.
- 1 4. The method of claim 1 wherein first objects are spectrum licenses for communication
- 2 spectrum and second objects are related clearing rights for television transmission in the same or
- 3 adjacent spectrum.

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- 5. The method of claim 1 wherein step c) terminates an auction in the event no new bids were
- 2 submitted and wherein step c) also transmits new bidding information to bidders in the event the
- 3 auction is not terminated.
- 1 6. The method of claim 1 wherein step f) is limited to selected bidders.
- 7. The method of claim 1 wherein, preparatory to the auction initiated at step a), a related auction
- 2 is conducted, the related auction selecting a relation between a price of a first object and a price
- 3 of a complementary second object, the related auction comprising the steps of:
 - al) providing information to bidders of the initiation of the related auction,
 - a2) receiving bids from bidders concerning the relation; and
 - a3) selecting a relation between the price of a second object and the price of a first object, based on the bids of step a2).
 - 8. The method of claim 7 further including selecting as participating bidders those bidders who either bid at least the selected relation or who accede to the selected relation..
- 9. The method of claim 1 wherein only steps a) -e) inclusive are performed by or with the aid of
- 2 the computer.

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1 10. The method of claim 1 wherein steps a) -f) are performed by or with the aid of the computer.

- 11. A method for using a computer to implement an auction of a set of licenses for 1
- communication spectrum and one or more complementary second objects, each second object 2
- comprising clearing rights related to a license, two or more bidders participating in the auction, 3
- 4 the method comprising:
- a) initiating an auction by identifying available communication licenses to bidders, 5
- b) inputting, into the computer, bids for the communication licenses from bidders, 6
- c) determining at the computer whether to continue the auction, based on whether at least 7
- one new bid of step b) exceeded a minimum acceptable bid, and in the event the auction is 8
- continued, sending information to bidders respecting a minimum acceptable bid, 9
 - d) repeating steps b) and c) until the auction is terminated,
 - e) assigning the communication licenses to successful bidders based on the bids in force at the time the auction is terminated, and
 - f) assigning to a successful bidder a related clearing right at a price related to the bid in force at the time the auction is terminated.
 - 12. The method of claim 11 which includes assigning each clearing right to the successful bidder
- 2 for the related communication license.
- 13. The method of claim 11 wherein only steps a) -e) are performed by or with the aid of the 1
- 2 computer.

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14. The method of claim 11 wherein steps a)-f) are performed by or with the aid of the computer. 1

- 1 15. The method of claim 11 wherein, preparatory to the auction initiated at step a), a related
- 2 auction is conducted, the related auction selecting a relation between a price of a clearing right
- and a price of a related communication license, the related auction comprising the steps of:
- 4 a1) providing information to bidders of the initiation of the related auction,
- 5 a2) inputting to the computer bid information for the relation;
- 6 a3) determining at the computer, based on the bid information of step a2) to terminate the
- 7 auction unless at least one new acceptable bid was submitted wherein an acceptable bid is
- 8 considered larger than a preexisting bid, in the event the auction is not terminated sending
- 9 information respecting the highest bids for the relation to participating bidders as indicating bids
- 0 which are not acceptable, and
 - a4) in the event the related auction is terminated, selecting the relation as the highest bid
 - for the proportion of price of a clearing right and related communication license.
 - 16. The method of claim 15 wherein only steps a1)-a3) and a) -e) are performed by or with the
 - aid of the computer.
- 1 17. The method of claim 15 wherein steps a1)-a4) and a)-f) are performed by or with the aid of
- 2 the computer.
- 1 18. A method for using a computer to implement an auction of a set of first objects and a set of
- 2 second objects, at least one first object having a complementary second object, at least one
- 3 second object having a complementary first object, two or more bidders participating in the
- 4 auction, the method comprising:

- a) initiating an auction by identifying available objects to bidders,
- 6 b) inputting, into the computer, bids for first objects from bidders,
- 7 c) inputting, into the computer, bids for second objects from bidders, where an acceptable
- 8 bid for a second object is constrained by a bid for a complementary first object,
- 9 d) determining, at the computer, based on the bids of steps b) and c), whether the auction should continue,
- e) repeating steps b), c) and d) until the auction is terminated, and
- f) assigning the objects to bidders based on the bids in force at the time the auction was terminated.
 - 19. The method of claim 18 wherein first objects are communication licenses and second objects are clearing rights related to a communication license.
 - 20. The method of claim 19 wherein an auction is terminated at step d) when no new acceptable bids are received.
- 21. The method of claim 20 wherein an acceptable bid is a bid of greater price than a preexisting
 bid.
- 1 22. A method for using a computer to implement an auction of one or more clearing rights
- 2 related to a first auction of communication licenses, where each clearing right is complementary
- 3 to a communication license, the first auction assigning the communication licenses to successful

- bidders based on bids for the communication licenses, two or more bidders participating in the 4
- 5 first auction, the method comprising:
- 6 assigning a clearing right to the successful bidder for the complementary communication
- 7 license.
- 23. The method of claim 22 wherein, preparatory to the first auction of communication licenses a 1
- 2 further auction is conducted, the further auction selecting a relation between a price of a clearing
- 3 right and a price of a communication license, the related auction comprising the steps of:
 - a1) providing information to bidders of the initiation of the further auction,
 - a2) receiving bids from bidders concerning the relation; and
 - a3) selecting a relation between the price of a clearing right and the price of a communication license, based on the bids of step a2), and selecting as participating bidders those bidders who accede to the selected relation.
 - 24. The method of claim 22 wherein the assigning step assigns a plurality of clearing rights, in each case, to the successful participating bidder of the communication license.
- 1 25. The method of claim 22 which includes the preparatory steps of:
- a) receiving a plurality of clearing agreements, each of the agreements concerning 2
- 3 television broadcasting rights or other encumbrances to one or more licenses for communications
- 4 spectrum,

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ttorney Docket:	3788-7007

- b) manipulating the clearing agreements to create one or more separate clearing rights, each of the clearing rights aligning, in location on the electromagnetic spectrum and in
- geographic location, with the scope of one of the communications licenses, and 7
- c) storing the results of step b) so that clearing rights and the associated clearing 8 9 agreements can be correlated.
- 1 26. The method of claim 25 which further includes conducting a further auction for selecting a
- relation between a price of a clearing right and a price of a communication license, the further 2
- 3 auction includes the steps, of
 - d) providing information to bidders of the initiation of the further auction,
 - e) receiving bids from bidders concerning the relation; and
 - f) selecting a relation between the price of a clearing right and the price of a communication license, based on the bids of step e), and selecting as participating bidders those bidders who accede to the selected relation.
 - 27. A method for using a computer to facilitate an auction of clearing rights, the clearing rights corresponding to licenses for communications spectrum, two or more bidders participating in the auction, the method comprising:
- 4 a) receiving a plurality of clearing agreements, each of the agreements concerning 5 television broadcasting rights or other encumbrances to one or more licenses for communications 6 spectrum,

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b) manipulating the clearing agreements to create a plurality of separate clearing rights,
each of the clearing rights aligning, in location on the electromagnetic spectrum and in
geographic location, with the scope of a different one of the communications licenses

- c) storing the results of step b) so that clearing rights and the associated clearing agreements can be correlated.
- 1 28. The method of claim 27 wherein the manipulating step includes aggregating several
- 2 agreements into a single clearing right in the event a clearing agreement has a geographic scope
- 3 smaller than a communication license.
 - 29. The method of claim 27 wherein the manipulating step includes partitioning a clearing agreement into more than a single clearing right in the event the clearing agreement has a geographic scope exceeding that of a communication license.
 - 30. The method of claim 27 wherein the manipulating step includes aggregating several agreements into a single clearing right in the event a clearing agreement has a geographic scope
- 3 smaller than a communication license and partitioning a clearing agreement into more than a
- 4 single clearing right in the event the clearing agreement has a geographic scope exceeding that of
- 5 a communication license.
- 1 31. The method of claim 27 which further comprises:
- d) assigning to a successful bidder a clearing right aligned with the communication
- 3 license.



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- 1 32. The method of claim 31 which further includes the steps preparatory to step d) of:
- 2 c1) conducting an auction of at least some of the communication licenses.